Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

June 14, 2022

Title V Construction
Statement of Basis

Source: Clariant Corporation (Louisville South Plant)
4900 Crittenden Drive
Louisville, KY 40209

Owner: Clariant Corporation
500 E. Morehead Street
Charlotte, NC 28202

Application Documents:	See Table I-7		
Draft Permit:	May 13, 2022		
Permitting Engineer:	Karen Thorne	Permit Number:	C-0042-22-0011-V
Plant ID: 0042	SIC: 2819	NAICS:	325188

Introduction:

This permit will be issued pursuant to District Regulation 2.03, Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

This construction permit is for changes and/or modifications to Emission Units S02, S03, S13, S14, S17, S22, S29, S34, S35, and S38 of Clariant South Plant to correct certain reported deviations, including previously unpermitted equipment, changes in control devices, and other changes in plant operations that should have been reported to the District, as alleged in APCD Notice of Violation ENF-APCD-21-00013.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5,}$), and sulfur dioxide (SO_2). Jefferson County is classified as a nonattainment area for ozone (O_3).

Permit Application Type:

☒ Initial issuance

Permit Revision
- ☐ Administrative
- ☐ Minor
- ☐ Significant

☐ Permit renewal

Compliance Summary:

☒ Compliance certification signed
☒ Source is out of compliance
☐ Compliance schedule included
☐ Source is operating in compliance

I Source Information

1. Process Description

Various wet metal oxides are mixed with various additives to make catalysts. The wet catalyst is dried in box dryers, calcined, milled, screened, and packaged.

2. Site Determination

Clariant Corporation is the parent company, operates two facilities in Louisville, the South plant at 4900 Crittenden Drive and the West plant at South 12th Street. Based on information obtained from the company and the criteria used by EPA to make single source determinations, the District has determined that both locations are separate sources. Both locations would have to meet the following three criteria in order to be considered one single source for Title V and PSD/NSR applicability:

- Same industrial grouping,
- Common ownership or control, and
- Contiguous or adjacent locations.

Both locations have the same first two digit SIC code (28)

Both are 100% owned and operated by their parent company.

Neither location is contiguous or adjacent. Each plant acts independently of the other, operating separate production lines, with minimal transfer of material between plants that is commercially available from other suppliers. Furthermore, there are no Clariant Corporation dedicated transportation links between the plants.

3. Emission Unit Summary

Emission Unit	Equipment Description
101-S02	Mixing System; mixing of wet metal oxides with various additives
101-S03	Mixing and weighing of raw materials
101-S13	Catalyst System; precipitation of cobalt catalyst in lump form from solution
101-S14	Mixing and weighing of raw materials
101-S17	Reaction, precipitation, washing, drying, calcining and packaging
101-S22 and 101-S29	North and south screening System
102-S34	Ammonia Recovery System; removal of concentrated ammonia from vapor for storage and recycle in plant processes
102-S35	Stabilization System; air stabilization of reduced metal catalyst products
102-S38	Dissolving Metallic Nickel

4. Fugitive Sources

There are fugitive $PM/PM_{10}/PM_{2.5}$, VOC, HAP, NOx and TAC emissions from the manufacturing of customized precipitated catalysts, impregnated catalysts, and catalyst carriers.

5. Permit Revisions

Permit No.	Public Notice	Issue Date	Change Type	Description/Scope
C-0042-22-0011-V	05/14/22 - 06/13/22	06/14/22	Initial	This construction permit includes changes and/or modifications to units S02, S03, S13, S14, S17, S22, S29, S34, S35, and S38 of Clariant South Plant in order to correct reported permit deviations.

6. Application and Related Documents

Document Number	Date	Description
180461	12/16/2020	Clariant South updated STAR demonstration
189606	02/12/2021	Public Modification Construction Application
189607	02/12/2021	Confidential Modification Construction Application
233614	07/01/2021	Stack test and updated STAR EA demonstration
235699	07/09/2021	Updated public PTE
235698	07/09/2021	Updated confidential PTE
245293	08/10/2021	T-101-S17-004 SCREEN3 Summary
271295	09/09/2021	Updated public PTE
271296	09/09/2021	Updated confidential PTE
304034	01/26/2021	Company comments on draft permit
305326	01/24/2021	Public parameter range request
305327	01/24/2021	Confidential parameter range request

7. Emission Summary

Pollutant	Project Potential to Emit (PTE) Emissions (tpy)	Pollutant that triggered Major Source Status (based on PTE)
PM_{10}	0.14	*Yes
Total HAPs	0.20	*Yes
Single HAP		
Cobalt	0.002	*Yes
Nickel	0.112	*Yes

* The source has accepted synthetic minor limits for these pollutants.

8. Applicable Requirements

☐	40 CFR 60	☒	SIP	☒	40 CFR 63
☐	40 CFR 61	☒	District Origin	☐	Other

9. Referenced Federal Regulations

40 CFR 63 Subpart VVVVVV, National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

10. Non-Applicable Regulations: NA

II Regulatory Analysis

1. Acid Rain Requirements

The source is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Clariant Corporation (Louisville South Plant) does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. Prevention of Accidental Releases 112(r)

The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District

Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount.

4. 40 CFR Part 64 Applicability Determination

The source is not a major source, because the source has taken synthetic minor limits for all criteria pollutants; therefore, this source is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring*.

5. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
2.05	Prevention of Significant Deterioration of Air Quality	Establishes requirements for the prevention of deterioration of air quality in regions of the country that currently meet the NAAQS
2.16	Title V Operating Permits	Establishes requirements for the operating of Title V permits
5.00 (STAR)	Definitions	Establishes definitions of terms used in the Strategic Toxic Air Reduction Program
5.01 (STAR)	General Provisions	Establishes the requirements for Environmental Acceptability for Toxic Air Contaminants (TACs).
5.20 (STAR)	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	Establishes the methodology for determining the benchmark ambient concentration of a toxic air contaminant
5.21 (STAR)	Environmental Acceptability for Toxic Air Contaminants	Establishes the criteria for determining the environmental acceptability of emissions of toxic air contaminants
5.22 (STAR)	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	Establishes the procedures for determining the maximum ambient concentration of a toxic air contaminant (STAR)
5.23 (STAR)	Categories of Toxic Air Contaminants	Establishes categories of toxic air contaminants. (STAR)
7.08	Standards of Performance for New Process Operations	Establishes emission standards for processes that emit PM which were installed after September 1, 1976.

Regulation	Title	Basis
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	Establishes VOC standards for storage tanks constructed after April 19, 1972 with a capacity greater than 250 gallons
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Establishes VOC standards for affected facilities constructed after June 13, 1979.
40 CFR 63 Subpart VVVVVV	National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources	Applies to equipment emitting hazardous air pollutants.

b. Plantwide

i. The Clariant South Plant has potential major source emissions of $PM_{10}/PM_{2.5}$, NO_X, SO_2, CO, single HAP, and total HAPs. To preclude the requirements of Regulation 2.05, Prevention of Significant Deterioration of Air Quality, the source is subject to a plantwide limit of less than 100 tons during any consecutive 12-month period for $PM/PM_{10}/PM_{2.5}$, NOX, CO, and SO_2. Pursuant to Regulation 2.16, section 4.1.1, the source is required to limit the plantwide emissions of any individual HAP to less than 10 tons during any consecutive 12-month period. For all HAPs combined, the source is required to limit the plantwide emissions of all HAPs to less than 25 tons during any consecutive 12-month period.

ii. Regulation 2.03, section 6.1 requires sufficient monitoring, record keeping, and reporting to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

iii. Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Clariant submitted their Category 1 and 2 TAC Environmental Acceptability Demonstration to the District on September 30, 2008. Regulation 5.21, section 4.14 exempts Category 2 TACs that were not reported on a company's Toxic Release Inventory (TRI) Report. The source did not report aluminum, hydrochloric acid, manganese, and sulfuric acid on their 2007 TRI Report. This includes hydrochloric acid emissions from EU 102-S37. Natural gas combustion sources at this facility are *de minimis* in accordance with Regulation 5.21, section 2.7. For TACs listed as compounds, the BAC was developed for the base element, and therefore, all analysis for these TACs was done in terms of the amount of base metal present in the compound. Regulation 5.21, section 4.2.3.1 allows controlled PTE as an alternative measure to

demonstrate environmental acceptability. Regulation 5.21, section 4.3 requires alternative measures to be established as emission limits in the permit for the process or process equipment. Any time a controlled PTE was compared to *de minimis* levels in the environmental acceptability demonstration, *de minimis* was added as a limit to the permit per Regulation 5.21, section 4.3 along with a requirement to operate controls at all times. Any time a controlled PTE was modeled (Tier 3 or Tier 4) pursuant to Regulation 5.22, section 1.4; the modeled emission rate, converted from a pound per hour to a pound per 12-consecutive month, was incorporated into the permit as a limit.

At the time of permit issuance, the de minimis values are as follows.

Pollutant	De Minimis		Averaging Period	Category
	lb/hr	lb/avg.		
Trivalent chromium and chromium compounds (Cr(III))	0.1	0.1	8-hour	1
Hexavalent chromium and chromium compounds (Cr(VI)),	0.000045	0.04	Annual	1
Nickel and nickel compounds (Ni)	0.0021	1.82	Annual	1
Ammonia	54.00	48,000	Annual	2
Cobalt and cobalt compounds (Co)	0.00022	0.19	Annual	2
Copper and copper compounds (Cu)	0.04	0.047	8-hour	2
Hydrochloric acid (HCl)	10.80	9,600	Annual	2
Manganese and manganese compounds (Mn)	0.027	24.00	Annual	2
Nitric acid (HNO_3)	1.00	1.00	8-hour	2
Sulfuric acid (H_2SO_4)	0.54	480.00	Annual	2
Antimony and antimony compounds (Sb)	0.76	672.00	Annual	4
Radon and various other radionuclides (U)	0.00022	0.19	Annual	4

The carcinogen risk and non-carcinogen risk values comply with the STAR EA goals required in Regulation 5.21, as noted in the following table.

EU	EP	TAC	Risk		HQ	
			Unadjusted ($EAG_C \leq 1.0$)	Industrial ($EAG_C \leq 10.0$)	Unadjusted ($EAG_{NC} \leq 1.0$)	Industrial ($EAG_{NC} \leq 3.0$)
S01	MX-101-S01-001	Mn	--	--	0.053	0.190
	MX-101-S01-001	Ni	0.263	0.935	0.071	0.254
S02	DD-101-S02-001	Co	0.437	1.555	0.019	0.068
	H-101-S02-001	Co	0.437	1.555	0.019	0.068
	MX-101-S02-001	Co	0.109	0.389	0.005	0.017
	DD-101-S02-001	Mn	--	--	0.067	0.237
	H-101-S02-001	Mn	--	--	0.067	0.237
	DD-101-S02-001	Ni	0.328	1.169	0.089	0.317

EU	EP	TAC	Risk		HQ	
			Unadjusted ($EAG_C \leq 1.0$)	Industrial ($EAG_C \leq 10.0$)	Unadjusted ($EAG_{NC} \leq 1.0$)	Industrial ($EAG_{NC} \leq 3.0$)
S02	H-101-S02-001	Ni	0.328	1.169	0.089	0.317
	MX-101-S02-001	Ni	0.082	0.292	0.022	0.079
S11	HT-101-NOX-001	Co	0.238	0.99	0.010	0.043
	HT-101-NOX-001	Ni	0.034	0.14	0.009	0.038
	HT-101-NOX-001	HCl	--	--	0.040	0.165
S12	HT-101-NOX-002	Co	0.189	0.78	0.008	0.034
	HT-101-NOX-002	Ni	0.027	0.11	0.007	0.030
	HT-101-NOX-002	HCl	--	--	0.031	0.130
S13	DD-101-S13-001	Co	1.000	1.169	0.044	0.051
S15	H-101-G84-006/CV-101-G84-005/PD-101-G84-004	Cr(III)	--	--	0.111	0.354
S16	Fugitives	Ammonia	--	--	0.083	0.543
S17	Fugitives	Ammonia	--	--	0.054	0.27
	T-101-S17-004	Uranium	0.241	1.40	0.004	0.023
S20	T-101-S20-001	HNO_3	--	--	0.087	0.438
S22	DD-101-S22-001/H-101-S22-001	Co	0.178	0.538	0.0078	0.024
S2	HT-101-NOX-003a	Cu	--	--	0.031	0.130
	HT-101-NOX-003a	Mn	--	--	0.028	0.118
	HT-101-NOX-003a	Ni	0.218	0.904	0.059	0.245
S25	HT-101-NOX-004a	Ni	0.131	0.542	0.035	0.147
S29	DD-101-S29-001/H-101-S29-001	Cobalt	0.178	0.551	0.0078	0.024
S30	T-102-S30-105	Ni	0.239	0.953	0.065	0.259
S31	T-102-S31-107	Ni	0.13	0.29	0.034	0.078
S38	T-102-S38-002	Ammonia	--	--	0.014	0.016
	T-102-S38-003	Ammonia	--	--	0.014	0.016
	T-102-S38-003	Ni	0.964	1.127	0.262	0.306
	Fugitives	Ammonia	--	--	0.272	1.780
S39	MX-102-S39-001	Co	0.073	0.253	0.0032	0.011
Plantwide R_C (existing)*:			5.69	16.52	--	--
Highest Plantwide HQ for single TAC (Nickel):**					0.71	1.99

* Plantwide R_C for unadjusted new and modified ≤ 3.8 and unadjusted total ≤ 7.5; Plantwide R_C for industrial new and modified ≤ 38.0 and industrial total ≤ 75.0

** Plantwide HQ for unadjusted total ≤ 1.0; plantwide HQ for industrial total ≤ 3.0

iv. The PM control efficiencies for baghouses used by Clariant are based on the following stack tests. The control efficiency for PM is also used for PM TACs/HAPs: hexavalent chromium and chromium compounds (Cr(VI)), trivalent chromium and chromium compounds (Cr(III)), nickel and nickel compounds (Ni), ammonia (NH_3), cobalt and cobalt compounds (Co), copper and copper compounds (Cu), hydrochloric acid (hydrogen chloride) (HCl), manganese and manganese compounds (Mn), nitric acid (HNO_3), sulfuric acid (H_2SO_4), antimony and antimony compounds (Sb) and radon and other radionuclides (U).

Bag Type	Control Efficiency	Tested Control Device	Test Date
MAC 80/20	99.8%	DC-203-W25-128	May 4, 2021, reported July 1, 2021
Mott tubes	99.96%	DC-101-S16-117	Oct. 8, 2020, reported Nov. 9, 2020
Nomex	99.8%	DC-201-W12-250	May 5, 2021, reported July 1, 2021
Polyester	99.6%	DC-101-S15-112	May 6, 2021, reported July 1, 2021
Torit UlraWeb Cartridge	99.7%	DC-201-W03-500	July 22, 2020, reported Oct. 1, 2020

All other baghouses are assumed to have a 95% control efficiency.

HEPA filters are assumed to have a 99.97% control efficiency, based upon manufacturer's certification.

c. EU 101-S02 - Mixing System; mixing of wet metal oxides with various additives

EP	Description	Install Date	Applicable Regulations	Control ID
DD-101-S02-001	Drum Dumper	1993	7.08, STAR, 40 CFR 63 VVVVVV	DC-101-NOX-119
H-101-S02-001	Mixer Feed Hopper	1993		
MX-101-S02-001	#2 Mixer	1993		

Control ID	Description	PM Control Efficiency
DC-101-NOX-119	Baghouse, Mikro-Pulsaire, Model 36S8-30 [polyester type]	99.6%

i. Standards

(1) HAP

EP DD-101-S02-001, H-101-S02-001, and MX-101-S02-001 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) $PM/PM_{10}/PM_{2.5}$

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

(b) The owner or operator shall not allow copper emissions to exceed de minimis levels from DD-101-S02-001, H-101-S02-001, and MX-101-S02-001.

(c) Cobalt emissions shall not exceed 1.60 lb/12-consecutive months from DD-101-S02-001 and H-101-S02-001, each, and 0.40 lb/12-consecutive months from MX-101-S02-001.

(d) Manganese emissions shall not exceed 30.48 lb/12-consecutive months from DD-101-S02-001 and H-101-S02-001, each.

(e) Nickel emissions shall not exceed 11.39 lb/12-consecutive months from DD-101-S02-001 and H-101-S02-001, each, and 2.86 lb/12-consecutive months from MX-101-S02-001.

(f) The potential TAC emissions for the emission points are listed in the table below.

EP	Co	Cu	Mn	Ni
DD-101-S02-001	Over de minimis[1]	1st	Over de minimis	Over de minimis
H-101-S02-001		1st		
MX-101-S02-001		1st	1st	

d. EU 101-S03 – Mixing and weighing of raw materials

EP	Description	Install Date	Applicable Regulations	Control ID
T-101-S03-005[2]	Overflow Tank	2007	STAR	NA

[1] This emission point exceeds de minimis controlled, but the company provided SCREEN3 modeling on 12/16/2020, updated on 07/09/2021, which meets EA goals.

[2] This tank is not new but was not included in previous permits.

i. Standards

(1) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

(b) The owner or operator shall not allow ammonia or nitric acid emissions to exceed de minimis levels from T-101-S03-005.

(c) The potential uncontrolled TAC emissions of ammonia and nitric acid from EP T-101-S03-005 are less than de minimis.

e. EU 101-S13 – Catalyst System; precipitation of cobalt catalyst in lump form from solution

EP	Description	Install Date	Applicable Regulations	Control ID
DD-101-S13-001[3]	Drum Dumper	1985	7.08, 40 CFR 63 VVVVVV	ME-101-S13-001 SC-101-S34-100
T-101-S13-006[4]	NH3 Recovery Tank	1985		SC-101-S34-100

Control ID	Description	PM Control Efficiency
ME-101-S13-001	Mist Eliminator SCI	95% (PM), 75% (NH3)
SC-102-S34-100	Wet Scrubber (single stage), SCI, Model DWG-E-102-AR2-31	95% (PM), 75% (NH3)

i. Standards

(1) HAP

EP DD-101-S13-001 and T-101-S13-006 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) $PM/PM_{10}/PM_{2.5}$

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

[3] DD-101-S13-001 is included in this permit because a production limit was needed to meet STAR.
[4] T-101-S13-006 is not controlled by mist eliminator ME-101-S13-001, it vents directly to SC-102-S34-100.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs

(b) The owner or operator shall not allow cobalt emissions to exceed de minimis levels from DD-101-S13-001.

(c) The potential cobalt emissions for EP DD-101-S13-001 are over de minimis.[5]

f. EU 101-S14 – Mixing and weighing of raw materials

EP	Description	Install Date	Applicable Regulations	Control ID
DD-101-S14-001/ H-101-S14-001	Drum Dumper / Feed Hopper	1998	7.08, STAR, 40 CFR 63 VVVVVV	DC-101-S03-123 FIL-101-S03-001
PD-101-S14-001	Product Drum	1998		

Control ID	Description	PM Control Efficiency
DC-101-S03-123	Baghouse, Flex-Kleen, Model 58 BVBS-36 [polyester type]	99.6%
FIL-101-S03-001	HEPA Filter, Torit Donaldson, Model Ultraweb	99.97%

i. Standards

(1) HAP

EP DD-101-S14-001/H-101-S14-001 and PD-101-S14-001 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) $PM/PM_{10}/PM_{2.5}$

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

[5] This emission point exceeds de minimis controlled, but the company provided SCREEN3 modeling on 12/16/2020, updated on 07/09/2021, which meets the EA goals.

(b) The owner or operator shall not allow chromium III, chromium VI, copper, manganese, or nickel to exceed de minimis levels from DD-101-S14-001/H-101-S14-001 or PD-101-S14-001.

(c) The potential TAC emissions for the emission points in the table below are less than de minimis, with the levels of control.

EP	Cr(III)	Cr(VI)	Cu	Mn	Ni
DD-101-S14-001/ H-101-S14-001	1st	2nd	2nd	1st	2nd
PD-101-S14-001	1st	2nd	2nd	1st	2nd

g. EU 101-S17 – Reaction, precipitation, washing, drying, calcining and packaging

EP	Description	Install Date	Applicable Regulations	Control ID
T-101-S17-015[6]	Hold tank	1984	STAR	NA
PD-101-S17-001	Rework Drum	1984	7.08, STAR	FR-101-S17-015
PD-101-S17-002	Product Dust Drum	1984		DC-101-S17-004

Control ID	Description	PM Control Efficiency
FR-101-S17-015	HEPA filter, Vacuum system, model 551DC	99.97%
DC-101-S17-004	HEPA filter, Vacumax, model MDL55DAF, 2 drums	99.97%

i. Standards

(1) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(2) Pollutant

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(3) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

[6] Tank T-101-S17-015 was identified in the permit as a closed tank. However, the tank generates ammonia emissions.

(b) The owner or operator shall not allow ammonia emissions to exceed de minimis levels from T-101-S17-015.

(c) The owner or operator shall not allow emissions of antimony and uranium to exceed de minimis levels from PD-101-S17-001 and PD-101-S17-002.

h. EU 101-S22 – Screening System[7]

EP	Description	Install Date	Applicable Regulations	Control ID
DD-101-S22-001/ H-101-S22-001	Drum Dumper/Hopper	1994	7.08, STAR, 40 CFR 63 Subpart VVVVVV	DC-101-S22-011 FIL-101-S22-011
FD-101-S22-001	Feeder			
H-101-S22-002	Supersack Hopper			
PD-101-S22-001	Product Drumout			
PD-101-S22-002	Supersack Drumout			
VS-101-S22-001	Screener			

Control ID	Description	PM Control Efficiency
DC-101-S22-011	Baghouse, Flex Kleen, Model 58-BVBG-36 [polyester type]	99.6%
FIL-101-S22-011	HEPA filter, Donaldson Torit Ultra Lok 1x2	99.97%

i. Standards

(1) HAP

EP DD-101-S22-001/H-101-S22-001, FD-101-S22-001, H-101-S22-002, PD-101-S22-001, PD-101-S22-002, and VS-101-S22-001 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) $PM/PM_{10}/PM_{2.5}$

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

[7] This equipment is included in the permit because Clariant increased the maximum cobalt concentration.

(b) The owner or operator shall not allow cobalt, chromium III, chromium VI, copper, manganese, or nickel emissions to exceed de minimis levels from DD-101-S22-001/H-101-S22-001, FD-101-S22-001, H-101-S22-002, PD-101-S22-001, PD-101-S22-002, and VS-101-S22-001.

(c) The owner or operator shall not allow chromium III, chromium VI, copper, manganese, or nickel emissions to exceed de minimis levels from DD-101-S22-001/H-101-S22-001.

(d) The potential TAC emissions for the emission points in the table below are less than de minimis, with the levels of control.

EU	EP	Co	Cr(III)	Cr(VI)	Cu	Mn	Ni
101-S22	DD-101-S22-001/H-101-S22-001	Over de minimis	2nd	2nd	2nd	2nd	2nd
	FD-101-S22-001	2nd	2nd	1st	2nd	2nd	2nd
	H-101-S22-002	2nd	2nd	2nd	2nd	2nd	2nd
	PD-101-S22-001		2nd	2nd	2nd	2nd	2nd
	PD-101-S22-002		2nd	2nd	2nd	2nd	2nd
	VS-101-S22-001		2nd	2nd	2nd	2nd	2nd

i. EU 101-S29 – Screening System[8]

EP	Description	Install Date	Applicable Regulations	Control ID
DD-101-S29-001/ H-101-S29-001	Drum Dumper / Hopper	1994	7.08, STAR, 40 CFR 63 Subpart VVVVVV	DC-101-S29-010 FIL-101-S29-010
FD-101-S29-001	Feeder			
PD-101-S29-001	Product Drumout			
VS-101-S29-001	Screener			

Control ID	Description	PM Control Efficiency
DC-101-S29-010	Baghouse, Mikro Pulsaire, Model 4958-20 [polyester type]	99.6%
FIL-101-S29-010	HEPA filter, Donaldson Torit Ultra Lok 1x2	99.97%

[8] • This equipment is included in the permit because Clariant increased the maximum cobalt concentration.

i. Standards

(1) HAP

EP DD-101-S29-001/H-101-S29-001, FD-101-S29-001, PD-101-S29-001, and VS-101-S29-001 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) PM/PM_{10}/$PM_{2.5}$

(a) Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

(b) The owner or operator shall not allow cobalt, chromium III, chromium VI, copper, manganese, or nickel emissions to exceed de minimis levels from DD-101-S29-001/H-101-S29-001, FD-101-S29-001, PD-101-S29-001, and VS-101-S29-001.

(c) The owner or operator shall not allow chromium III, chromium VI, copper, manganese, or nickel emissions to exceed de minimis levels from DD-101-S29-001/H-101-S29-001.

(d) The owner or operator shall not allow cobalt emissions from DD-101-S29-001/H-101-S29-001 to exceed 0.324 lb/12-consecutive months.

(e) The potential TAC emissions for the emission points are listed in the table below.

EP	Co	Cr(III)	Cr(VI)	Cu	Mn	Ni
DD-101-S29-001/H-101-S29-001	Over de minimis[9]	2nd	2nd	2nd	2nd	2nd
FD-101-S29-001	2nd	1st	2nd	2nd	2nd	2nd
PD-101-S29-001		2nd	2nd	2nd	2nd	2nd
VS-101-S29-001		2nd	2nd	2nd	2nd	2nd

[9] This emission point exceeds de minimis controlled, but the company provided SCREEN3 modeling on 12/16/2020, updated on 07/09/2021, which meets EA goals.

j. EU 102-S34 – Process tanks

EP	Description	Install Date	Applicable Regulations	Control ID
V-102-S34-100	Ammonia Recovery Stripping Column	Pre-1980 (replaced 10/06)	STAR	HE-102-S34-101/102/103 SC-102-S34-100

Control ID	Description	Control Efficiency
HE-102-S34-101	Condenser, Happy, Model 1F1016-1108-MVH	75% (NH_3)
HE-102-S34-102	Condenser, Happy, Model 1F1016-1108-MVH	75% (NH_3)
HE-102-S34-103	Condenser, Happy, Model 1F1016-1108-MVH	75% (NH_3)
SC-102-S34-100	Wet scrubber, SCI, Model DWG-E-102-AR2-31	75% (NH_3)

i. Standards

(1) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(2) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

(b) The owner or operator shall not allow ammonia emissions to exceed de minimis limits for V-102-S34-100.

(c) The potential uncontrolled ammonia emissions for EP V-102-S34-100 are less than de minimis.

k. EU 102-S35 – Stabilization System; air stabilization of reduced metal catalyst products[10]

EP	Description	Install Date	Applicable Regulations	Control ID
PD-102-S35-001	Product Drumout	1982	7.08, STAR,	DC-102-S35-212,
PT-102-S35-001	Product Tote			

[10] • Clariant requests to accept a limit of 96 lbs/hr for EU S35.

EP	Description	Install Date	Applicable Regulations	Control ID
SSD-102-S35-001	Super Sack Drumout	1982	40 CFR 63 Subpart VVVVVV	FIL-102-S35-008
T-102-S35-108	Bagger Discharge Tank			FIL-102-S35-004
T-102-S35-109	Drummer Discharge Tank			FIL-102-S35-006
V-102-S35-001	Stabilizer			Internal Mott FIL-102-S35-009

Control ID	Description	PM Control Efficiency
Internal Mott	Mott tube filter, Mott Metallurgical Corp. Porous Filter 2244-A16-36-A00-KB	99.933%
DC-102-S35-212	Baghouse, Flex Kleen, Model 58-BVBC-25-III [Nomex type]	99.8%
FIL-102-S35-004	Mott tube filter, Mott Metallurgical Corp. Porous Filter 6400S-1 ½-2-1-17.75-20-AB	99.96%
FIL-102-S35-006		
FIL-102-S35-008	HEPA filter, Donaldson Torit Ultra Lok 1x1	99.97%
FIL-102-S35-009 (was FIL-102-S35-003)	Mott tube filter, Mott Metallurgical Corp. Porous Filter 2248S-B32-18-A00-5-AB	99.96%

i. Standards

(1) HAP

EP PD-102-S35-001, PT-102-S35-001, SSD-102-S35-001, T-102-S35-108, T-102-S35-109, and V-102-S35-001 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) $PM/PM_{10}/PM_{2.5}$

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

(b) The owner or operator shall report the consecutive 12-month processing rate in EU 102-S35 for each month in the reporting period.

(c) The potential TAC emissions for the emission points are listed in the table below.

EU	EP	Ni
102-S35	PD-102-S35-001	1st
	PT-102-S35-001	1st
	SSD-102-S35-001	1st
	T-102-S35-108	1st
	T-102-S35-109	1st
	V-102-S35-001	1st

l. EU 102-S38 - Dissolving Metallic Nickel

EP	Description	Install Date	Applicable Regulations	Control ID
T-102-S38-003[11]	Central Tank, 5891 gal	1994	7.08, STAR, 40 CFR 63 VVVVVV	SC-101-S34-100

Control ID	Description	Control Efficiency
SC-102-S34-100	Wet Scrubber, two stage, SCI, Model DWG-E-102-AR2-31	95% (PM), 75% (NH_3)

i. Standards and Operation Limits

(1) HAP

EP PD-102-D35-001, PT-102-S35-001, SSD-102-S35-001, T-102-S35-108, T-102-S35-109, and V-102-S35-001 are subject to 40 CFR 63 Subpart VVVVVV.

(2) Opacity

Regulation 7.08, section 3.1.1, establishes a standard for opacity to not equal or exceed 20%.

(3) $PM/PM_{10}/PM_{2.5}$

Regulation 7.08, section 3.1.2, establishes PM standards for process equipment.

(4) TAC

(a) Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of TACs.

[11] Clariant requested a limit of 205 lbs/hr from T-102-S38-003.

(b) For EP T-102-S38-003, the owner or operator shall not allow the processing rate to exceed 1,795,800 pounds per consecutive 12-month period.

(c) The potential controlled nickel emissions for EP T-102-W38-003 are over de minimis. [12]

III Other Requirements

1. Temporary Sources

The source did not request to operate any temporary facilities.

2. Short Term Activities

The source did not report any short term activities.

3. Emissions Trading

The source is not subject to emission trading.

4. Alternative Operating Scenarios

The source did not request any alternative operating scenarios.

5. Compliance History Since Last Operating Permit

Incident Date	Description	Penalty	Status
03/02/2015	Failed to report completely and accurately excursions from permitted operating ranges	$0	In compliance
04/30/2019	Failure to complete performance testing	$60,000	In compliance
01/01/2020 - 06/30/2021	Compliance with Title V Permit (combined with West Plant)	$481,500	Agreed Board Order
01/01/2020 - 06/30/2021	Compliance with Title V Permit (combined with West Plant)		

6. Calculation Methodology or Other Approved Method

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc.) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

[12] This emission point exceeds de minimis controlled, but the company provided SCREEN3 modeling on 12/16/2020, updated on 07/09/2021, which meets EA goals.

7. Removed Equipment

EU	Equipment
S04	The process is out of service and should be removed from the permit.
S06	The process is out of service and should be removed from the permit.
S09	The process is out of service and should be removed from the permit.
S13	Economizer HE-101-S34-100 no longer operates as a control device
S14	Hopper H-101-S14-002
S15	Hopper M-101-S15-006
S16	T-101-S16-101 and 102, control device HE-101-S34-100
S17	T-101-S17-001
S19	DD-101-S19-001, H-101-S19-001, DB-101-S19-001, DC-101-FITZ-118 and FIL-101-FITZ-118
S27	T-101-S27-001
S30	Cobalt products are no longer processed in this emission unit
S36	Economizer HE-101-S34-100 no longer operates as a control device
S37	T-102-S37-001
S38	T-102-S38-002
S39	VS-102-S39-002, VS-102-S39-001, CV-102-S39-001, H-102-S39-001 and PD-102-S39-001